NASA Glenn
Plum Brook Station

NINTH EDITION
JANUARY 2004

Decommissioning NEWS
Plum Brook Station

A quarterly newsletter to inform the public about NASA's Decommissioning Activities

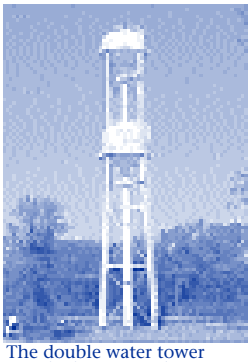
NASA completes productive year of decommissioning


Wachs personnel continued removing components from the reactor core box.

NASA capped a year of decommissioning accomplishments with several activities during the fourth quarter of 2003. Segmentation and removal of the reactor internals continued as workers from subcontractor Wachs Technical Services cut and removed several components near the reactor core box. "They've been going after the heart of the reactor," observed NASA Senior Project Engineer Keith Peecook. Using video camera monitors and long-handled tools operated behind shielding, workers initially removed components with low levels of contamination before taking out more highly irradiated components known as control rods from the reactor vessel.

The control rods, which had been used to control the reactor's power when it was operational, were first placed in special "buckets" before their removal, then lifted by crane from the reactor tank into a steel cask liner. Workers exercised great care, moving the liner into a "transfer" cask (consisting of two inches of steel, over six inches of lead, over another two inches of steel) and using a special rubberized compound to immobilize the components. Later, the liner containing the components was moved into a shipping cask for shipment to the licensed disposal facility in Barnwell, South Carolina. According to Peecook, the dose rate at the top of the reactor tank before the rods were removed was 1000 millirem (1 Rem) per hour, essentially equal to twenty percent of the allowable level of exposure for a worker over an entire year. By packaging and stabilizing these components, workers reduced the dose level and made the area safer for ongoing segmentation work.

Segmentation is one of many activities taking place throughout the 27-acre Reactor Facility. These include removal of loose equipment from the Hot Dry Storage Pit in the Hot Lab building (see page 3) and demolition of several structures. Foremost was the 193-foot tall, double water tower that stood adjacent to the Reactor Facility from 1959 until last October 15. At the quarterly meeting of the project's Community Workgroup on October 21, Peecook showed members a video (shot from several angles) of the demolition, noting that NASA had provided advance notice to county and local authorities and to the 24-hour, toll-free Decommissioning Information Line (1-800-260-3838).


The double water tower stood adjacent to the Reactor Facility from 1959...


....until its demolition last October.

According to Peecook, a NASA subcontractor placed explosive charges on tower's legs to collapse it in a safe, controlled manner. In November workers cut the tower into pieces, using a specially designed hydraulic shear mounted on a vehicle. They packaged the cut pieces and stored them for shipment to the Alaron waste reprocessing facility in Wampum, PA.


Workers used a hydraulic shear to cut up the tower in November.

NASA also demolished several other structures (see chart on page 2) including the Mock-up Reactor. The fourth quarter was also a time of increased activity for shipping dry, solid low-level radioactive waste (LLRW), mostly equipment removed from the Reactor Facility and packaged for transport to Alaron and the Envirocare licensed disposal facility in Clive, Utah. Last fall, 2-5 trucks a week were leaving Plum Brook Station. NASA anticipates up to 10 shipments a week over the next several months. Last year NASA safely shipped more than

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WHAT'S INSIDE

Other ways to receive Decommissioning INFORMATION

FACT SHEETS
Since June 1999, NASA has produced fact sheets dealing with various aspects of Decommissioning. Copies are available at public libraries throughout Erie County, at the Community Information Bank at the BGSU Firelands Library, on our Decommissioning Website at www.grc.nasa.gov/WWW/pbrf and by calling our Information Line at 1-800-260-3838.

COMMUNITY INFORMATION BANK
NASA has established a Community Information Bank (CIB) at the BGSU Firelands Library. The CIB serves as a permanent repository of information on the Decommissioning Project which NASA continually updates. All information at the CIB is available to the public upon request.

DECOMMISSIONING WEBSITE
Decommissioning information is available on-line. Visit us at www.grc.nasa.gov/WWW/pbrf

SPEAKERS
NASA will provide speakers upon request to civic, community and school organizations throughout Decommissioning. A video or slide presentation may be presented. For further information, contact Sally Harrington through our Information Line at 1-800-260-3838, her direct line at 216-433-2037, or at s.harrington@grc.nasa.gov.

Community Information Session Brings Together NASA'S PAST, PRESENT & FUTURE

Elements of NASA's past, present and future came together at Sandusky High School last October, during the fifth annual Community Information Session (CIS) for the Decommissioning Project. The past was evidenced by photographs and artifacts from the Reactor Facility and by excerpts from a historical documentary being produced about the facility. NASA's present was reflected in a series of displays depicting recent decommissioning progress and through interaction between visitors and Decommissioning Team members. The CIS also featured elements of NASA's current, ongoing work and future focus - including an exhibit on educational programs; and on the Aero Bus, one of NASA's many traveling exhibits, which was parked outside the school. Visitors climbed aboard to watch an animated video on the Mars Exploration Rover (MER) Mission.


Workgroup member John Blakeman greets area residents.


Students learned about the project at a display staffed by Decommissioning Team member Steve Neilson (at left).

The first CIS in Sandusky brought together nearly 100 people - twice the previous high - as residents from Erie County and beyond flocked to the multimedia event. Three generations attended, from NASA retirees like Len Homyak and Jim Martz, to adult residents and parents, to several students from Sandusky and Perkins High Schools and members of Boy Scout Troop 83. Peggy and Mike Young of Margaretta Township attended their first decommissioning event. While they knew the Reactor Facility was being decommissioned, they had not known much else beforehand. Peggy Young was "impressed with how knowledgeable people were" at both the CIS and the quarterly meeting of the project's Community Workgroup.

Mike Maple of Port Clinton found the event "very interesting - very well done and planned," adding that he learned more about radiation. Many area educators, including Perkins High School principal (and Workgroup member) Chris Gasteier, Sandusky High School principal Dan Poggiali and Sandusky High School teacher Tom Surdyk see educational value in the Decommissioning Project and encouraged students and teachers to attend. Gasteier distributed flyers to faculty members, resulting in a large Perkins student turnout. "Some (Perkins) kids told me the next day that they enjoyed it," he added.

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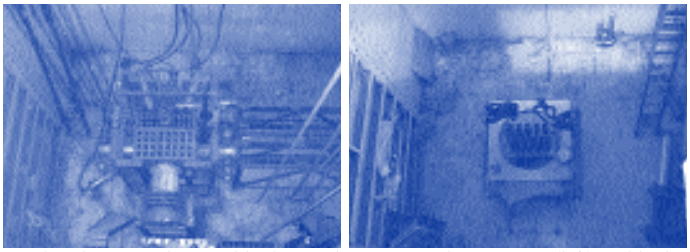
NASA COMPLETES PRODUCTIVE YEAR (CONTINUED FROM PAGE 1)

a million pounds of LLRW from the Reactor Facility. Other ongoing activities include characterization of equipment to be removed from Reactor Facility buildings and removal of hazardous materials, including asbestos, prior to demolition.

Looking back, Decommissioning Project Manager Tim Polich reflected, "This has been a pivotal year for the project - one full of accomplishment. We've worked harder, smarter, safely and creatively - and we're on track to complete a safe and successful decommissioning by 2007."■


Workers began to disassemble the Mock-up Reactor last summer (left) and had nearly completed the job in this photo from November (right).

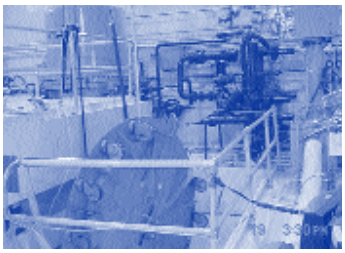
Structure	Former Purpose	Demolished
Double Water Tower	Stored nearly 110,000 gallons	October
Water Treatment Precipitator	Part of water treatment system	November
Mock-up Reactor	Smaller, accurate replica of main reactor was used as a simulator for reactor experiments	August-November
Gas House	Contained controls for the gas yard, used in supplying bottled helium to the Reactor Facility	November
Gas Compressor Building	Compressed helium into a liquid state, then supplied cryogenic helium for use in reactor experiments	December


The Precipitator had once been part of the Reactor Facility's water treatment system.


In November workers used the hydraulic shear to demolish the structure.

Do you want to know what 's happening? Do you have questions or comments on Decommissioning?
CALL OUR INFORMATION LINE AT 1-800-260-3838.

Work on Hot Lab Cleanup Goes Forward

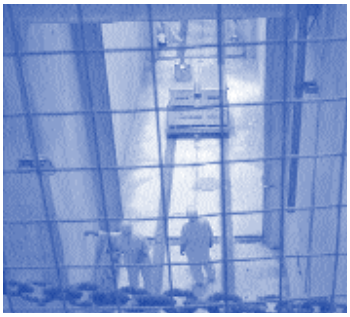


Workers remove equipment from Hot Dry Storage Pit.

During 2003, a group of highly skilled workers from project team member Montgomery Watson Harza (MWH) began decommissioning and decontamination work in the Hot Lab building, part of the Reactor Facility. The Hot Lab is adjacent to the Reactor Building and separated from it by a thick concrete shield wall. It contains the following areas: a Hot Dry Storage (HDS) Pit, Hot Cells, a Decontamination Room and Component Transfer Canals that were once filled with water. When the Reactor Facility was operational, the Hot Lab was used for storing reactor experiments and components and for examining test assemblies (used to insert material into the reactor).

The MWH team, which includes engineers and Radiation Protection professionals, has recently been working on HDS, a large, deep, shielded pit where highly activated items from the reactor experiments - including old reactor control rods and long tubes - had been stored. [Activation refers to the metal material that became irradiated due to its proximity to the reactor core when it operated]. In November workers began removing and packaging loose equipment from HDS. The work was done remotely using long-handled tools and video monitors. Late last month workers began removing the bulk of the irradiated inventory from HDS. They placed the components in liners and moved them from the Hot Lab to the Containment Vessel, for placement in a shipping cask for eventual disposal.

During the summer and fall workers had characterized loose and fixed equipment for radiation content, then removed the equipment from several areas of the Hot Lab. In addition, workers installed a Canal Transfer System - consisting of rails, a cart and a crane - which is used for loading and moving the aforementioned HDS inventory into a designated area in the Containment Vessel. The system is also used for moving activated items from the Containment Vessel to a temporary shielded storage area in the Hot Lab.



Workers perform load test on cart, part of the Canal Transfer System.

The MWH team has also conducted characterization and preparatory work on the Hot Cells, seven shielded rooms with thick windows, remote manipulator arms and viewing periscopes. Once used for a variety of experiments, in 2001 the Hot Cells were a focus of pre-decommissioning activity. That summer workers entered the cells for the first time in nearly 30 years to remove and package some loose equipment, which NASA sent to the Alaron reprocessing facility. They completed the loose equipment removal from the Hot Cells last October. Starting in late January, the team will remove all remaining equipment and systems, and decontaminate the empty cells. Fixed equipment removal from HDS is scheduled for completion in March with Hot Cell equipment removal scheduled for completion this spring.■

COMMUNITY WORKGROUP MEMBER PROFILE

Chris Gasteier

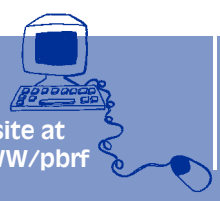
He has always been interested in history - and the land around what is now Plum Brook Station has been part of his family's history for five generations. Perkins resident Chris Gasteier grew up near the facility and has a natural interest in all things Plum Brook - including the Decommissioning Project and its Community Workgroup. A graduate of Perkins High School (PHS), and George Washington and Bowling Green State Universities, he taught history and agriculture at PHS for 14 years, before becoming an assistant principal in 1996. He became principal in 2001 and shortly thereafter joined the Workgroup.

Chris occasionally answers questions from neighbors and teachers about decommissioning, and he has sought to instill an appreciation for Plum Brook's history in his students. He hosted Community Information Sessions on the project at PHS in 2001 and 2002 and, last fall, encouraged several teachers to pass the word to their students about the Community Information Session held at Sandusky High School. His enthusiasm paid off, as dozens of Perkins students attended the event.

The principal recalls, years ago, "hearing the roar" of engine testing at Plum Brook Station and having his first chance to visit the facility "as a kid." He notes that its operations were "never a concern," but when he read in the newspaper about decommissioning and the Workgroup, his neighborly curiosity was aroused. In joining the Workgroup, Chris reflects, "I thought I'd be informed about certain things [regarding the project]," adding that his questions have always been answered by NASA. He says he's "impressed with the detail on how the job is progressing" during the presentations NASA officials make at Workgroup meetings - enabling him to answer community members questions about waste removal, packaging and transportation.

Chris says NASA has worked to "get broad categories of people on the Workgroup and I appreciate that." As the project goes on, he suggests, "It might be good to have a drive by" of the Reactor Facility, so that the Workgroup "could experience a visual change from what was there before." In so doing, he believes communication between Workgroup members and the larger community could be enhanced, as it was when members had a chance to tour the facility at the start of decommissioning. He also believes a decommissioning presentation at PHS "would reach a lot of kids." Chris looks forward to continuing on the Workgroup, observing, "I'm not a scientist or an expert - just a neighbor. Anything I can do increase community awareness, I'm happy to do."■

VISIT US ON-LINE
You can find our Decommissioning Website at www.grc.nasa.gov/WWW/pbrf



Topics in Upcoming Issue

Project Update

Workgroup member profile

NASA Ready to Publish Reactor Facility History, Getting Closer on Documentary Video

There's history in Erie County's future. NASA is publishing a pictorial history of the Reactor Facility and finalizing an hour-long documentary video on the facility. NASA Glenn History Officer Kevin Coleman said 2,000 copies of the book should be ready for distribution to schools, organizations and libraries next month. He added that the documentary, culled from 100 hours of footage, is being reviewed by NASA officials and may be ready this spring.

Coleman said the book - written by Dr. Mark Bowles and Bob Arrighi History Enterprises, Inc., the contractor hired for this effort - also covers the history of the land that is now Plum Brook Station. Originally farmland, it was acquired by the Army for an ordnance facility in World War II, then by NASA. He added that Bowles and History Enterprises colleague, Dr. Virginia Dawson, are also working on a scholarly, 400-page history of the Reactor Facility featuring 46 interviews (mostly with former facility workers) to be published around 2007.

Coleman is excited by the progress of the documentary, narrated by actress Kate Mulgrew (Captain Janeway of the Star Trek Voyager series). He added that producer-director Jim Polaczynski of InDyne, Inc. intends to have the video air on Public Broadcasting stations in Sandusky and Cleveland. The video will later be made available to schools and organizations. Eventually, a DVD version will be produced and distributed to schools and will include a number of features, such as Decommissioning Project footage and interactive lessons.

Based on last October's Community Information Session (CIS), Coleman believes the public will embrace the book and video. At the CIS, he and Debbie Demaline of InDyne, Inc. staffed an exhibit of Reactor Facility photographs and artifacts, and showed documentary excerpts. He said he "was really impressed by the interest attendees showed in the farmland history and in experiments that were conducted at the Reactor Facility," which are covered in the new releases.■

Community Information Session (Continued from page 2)

A science teacher, Surdyk said he understood the principles behind decommissioning but was "taken aback to see all the exhibits and displays...you could tour them at your own pace, with lots of NASA people to answer questions." The Aero Bus was a hit with many attendees including Roger Phillips of Berlin Heights, who said "It's important to keep people updated on what NASA is doing." Several visitors completed evaluation forms, indicating that interactions with Decommissioning Team members were the highlight of the CIS, followed by the Aero Bus, and voiced enthusiasm about attending future events. Decommissioning Project Manager Tim Polich said the CIS "strengthened NASA's relationship with the community. We had the chance to give people some information, see old friends and make new ones. We encourage people to join us for future Community Workgroup meetings and Information Sessions."■

NASA Glenn
Plum Brook Station
6100 Columbus Avenue
Sandusky, Ohio 44870

Next Community Workgroup Meeting
TUESDAY, JANUARY 27, 7p.m. - 9p.m.

Erie MetroParks (Osborn Park - Erie Room)
3910 East Perkins Avenue, Huron
(Follow the drive from the Park's entrance as far as the barn. The parking area and meeting room will be on the right.)

The meeting is open to the public